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In the Supreme Court of the United States

OCTOBER TERM, 1975

C. MARSHALL DANN, COMMISSIONER OF PATENTS AND TRADEMARKS, PETITIONER

v.

THOMAS R. JOHNSTON

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

REPLY BRIEF FOR THE PETITIONER

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Respondent's contention (Br. 22–42) that the claimed "invention" is a new machine within the scope of 35 U.S.C. 101 exalts the form in which patent claims are drafted over their substance. If the argument were accepted, this Court's decision in *Gottschalk* v. *Benson,* 409 U.S. 63, would be nullified simply by artful claims drafting describing computer programs in generalized "means plus function" terminology,

seemingly like that sometimes used in claims for real apparatus machinery.

Respondent's alleged invention is not a "machine" in any traditional sense, however it is claimed; it is simply a computer program put into a conventional general purpose digital computer. It is thus a machine only in the fictional sense, as can be seen from an examination of the specification and claims in the application.[1] They disclose not new apparatus, but simply the idea of using existing general purpose computers to maintain individual financial accounts in banks and credit systems, expressed as a computer program.

A. The specification in petitioner's application, particularly its introduction (A. 3—A. 5) and conclusion (A. 66—A. 67), describes an automatic record keeping system which uses a stored program digital computer to process bank customers' personal and business financial records. It operates by assigning category codes to be marked on the checks and deposit slips of the customer, according to the nature of the transaction. The specification then describes, in detail, a sequence of steps by which a computer may be programmed to operate the system.

Respondent distinguishes, moreover, between programming a general purpose computer to perform the

[1] A specification and claim are required by 35 U.S.C. 112. The specification is—

"a written description of the invention, and of the manner and process of making and using it * * * and shall set forth the best mode contemplated by the inventor of carrying out his invention.

"The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. 112.

recordkeeping, and constructing a special purpose computer to do so. His specification points out that "[i]n addition, the principles of this invention are applicable for use with a special purpose computer having all of the control mechanisms of the various runs and the files built into the computer in the form of equivalent logic design" (A. 66). Nonetheless, it continues, "the stored-program form of the invention described above is preferred in that it is comparatively much less expensive and more compact" (A. 67).

Finally, the specification supplies, as an example of "the best mode" required by 35 U.S.C. 12, "a printout of a complete program of one form of this invention for use in the IBM 1400-series computers" (A. 67), in a conventional computer language, Autocode, and states that "the program when assembled into the machine language for said IBM computer, controls and directs the operation of that computer in accordance with the invention * * *" (*ibid.*)

The foregoing, as the court below recognized, obviously describes nothing more than a computer program for providing financial statements to bank customers containing individual accounting details derived from category codes for particular transactions.[2]

[2] In determining whether respondent's invention constituted statutory subject matter the court below stated (Pet. App. 13A; second emphasis added):

"Such *machine* systems, *which comprise programmed digital computers*, are statutory subject matter under the provisions of § 101 * * *."

Judge Rich, in dissent, agreed with the majority's characterization, stating that we all know "the *invention* to be a new program" (Pet. App. 19A). Moreover, respondent has conceded that the

B. The claims (A. 107—A. 109) "point out and distinctly claim" under Section 112 only the idea of using categories to maintain individual financial records. They are broadly phrased to include any data processing systems, consisting of the equipment conventionally utilized in general purpose digital computers (memory, processor for combining and comparing coded signals, in-put and out-put devices, and a control system), when operated by the sequence of steps respondent utilizes to produce category totals for individual accounts. The claims, however, are not on their face limited to demand-deposit banking accounts, and the specification expressly states that it is not so limited (A. 65).

Respondent's claims that the subject matter thus specified and claimed are a process—"a new use of a known * * * machine" (35 U.S.C. 100(b)), *i.e.*, the general purpose digital computer—were abandoned in the court below following this Court's decision in *Benson* (Pet. App. 2A n. 1). Thus the only issue is whether a computer program can be claimed as a machine under the legal fiction that for purposes of 35 U.S.C. 101, the combination of a stored program and a general purpose computer creates a new special purpose computer.[3]

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invention was "reduced to practice in software form of computer programs" (*ibid.*) and "is being sold as a computer program to banks and to other data processing companies" (*ibid.*).

[3] Although the respondent's own specification distinguished between general purpose and special purpose computers (A. 66), he now asserts in this Court that he has invented a new "special-purpose computer which is preferably constructed with a stored program and a general-purpose computer" (Resp. Br. 23).

C. As Judge Rich correctly noted below, there is "no realistic distinction in kind between the Benson et al. invention and the invention here" (Pet. App. 21A). Both cases involve attempts to patent a computer program; both, in effect, involve attempts to patent an idea (one a mathematical idea and the other an idea for a method of doing business); and, in each case, the alleged invention has no practical application except when it is used in a digital computer. Respondent's attempted distinction between the forms of the claims—the *process* claims of Benson and the *machine* claims of Johnston—is without rational significance. As Judge Rich observed (Pet. App. 20A), and as is shown in Pet. App. D, a trivial modification of the *Benson* claim language converts such claims into "machine" form. Certainly, *Benson* involved more than the formalities of claim drafting. It looked to the substance of the patentability of computer programming.

Respondent's patent claims are no more limited to a particular art or technology, or directed to tangible machinery, than the *Benson* claims were or would be if they were redrafted into this same, fictitious "new machine" format. The respondent's specification and claims no more describe a "new machine" than would Benson's if restated in machine form (Pet. App. D). In its "best mode" the "discovery" is simply an old IBM computer into which respondent has inserted a new computer program. Respondent's contention (Br. 42) that a "machine is not an idea" begs the issue. Regardless of how his claims are

drafted, respondent has invented no hardware and uses only IBM's old hardware without any machine improvement of his own.

Respondent's complicated explanation of the circuitry of a programmed computer (Br. 29–34), and his labelling of a digital computer as a mere "storehouse of parts" (Br. 34), both fail to overcome the basic fact that this computer program is intended to provide, and is saleable only because it provides, a new use for the existing machines that the customers already possess. And that is what this Court in *Benson* held could not be patented. All complex machines are storehouses of parts, but they are parts which can be used for a purpose. Respondent has invented no such parts, but at most, only a non-patentable use of the existing parts. He has "constructed" no machine, but has simply proposed a switching arrangement amount the finite number of circuits available in existing general purpose digital computers.[4]

3. Respondent is incorrect in the contentions (Br. 37–41) that hardware or wired circuitry for programming or equipping special purpose computers

[4] The general purpose digital computer is specifically designed to perform a wide variety of data processing tasks. That is its function—its *raison d'etre*. It is the function of the computer program, within the structural limitations inherent in the computer employed, to direct the computer to process data in a specific way. A program is basically a switching arrangement among available electronic pathways, analogous to the switching system in a railroad yard. See Murphy, *1 Basics of Digital Computers*, p. 80 (1958). Thus, pragmatically, whenever a new program is developed it represents a new use for the standard, general purpose digital computer.

(which are not reprogrammable without rewiring them) and software programming for general purpose computers (which may be reprogrammed without rewiring them) are fully equivalent, and that since hardware-equipped, special purpose computers are recognized to be patentable machines then it follows that software-programmed computers must also be. Even if a general purpose digital computer is programmed to perform the same tasks as a specific-purpose, unprogrammable computer machine, the two are not the same under 35 U.S.C. 101, because they do not employ "the same or equivalent machine means." *Digitronics Corp.* v. *New York Racing Association, Inc.* (Docket No. 67 C 1119, E.D. N.Y., decided September 16, 1975), slip op. 213.[5] They are two different methods or means of obtaining the same end result—the first, by building a new hardware machine; the second, by putting an existing hardware machine to a new use. *Id.* at 212. A new use of an old machine is simply not a new machine; Congress made this

[5] In *Digitronics*, the court held that a general purpose digital computer programmed to perform the same function as a patented, special-purpose machine does not infringe the patent on the machine. Slip op. at 212. The court noted (*id.* at 213):
"The programmed general-purpose digital computer * * * does the same tasks but not by the same or equivalent machine means. Rather it performs the tasks—putting it most favorably to plaintiff—by a new use of a known machine and that is a process under 35 U.S.C. 100(b)."

clear in expressly providing for the patenting of new uses as processes, not as machines (35 U.S.C. 100(b)).

In any event, in the instant case, use of wired computer circuitry (instead of software programming) is without substantial practical application, as the specification observes (A.67), for it would destroy the versatility of the general purpose computers rented or otherwise employed by the banks (see Pet. Br. 32–34). The argument thus does not apply to the computers used here.

Finally, the argument is based on a *non sequitur*. Even if wired computers functioned similarly to software-programmed computers, it would not follow that Congress could not make the former patentable and the latter unpatentable, or even that it was irrational to do so. In economic regulation of this kind Congress must always strike a balance and draw dividing lines. See *Goldstein* v. *California*, 412 U.S. 546, 569–570. Certainly, on the one hand to allow "new machine" patents on newly-built machines only, and on the other hand to permit no more than method patents on new uses of old machines that function similarly to newly-built machines (when directed in a particular new way to do so)—is to strike a rational balance between the rights of owners of old machines (cf. *Aro Mfg. Co.* v. *Convertible Top Co.*, 365 U.S. 336, 342–343) and devisers of new ways to use them.[6]

[6] Significantly, the Report of the President's Commission on the Patent System, p. 13 (1966) concluded that "creation of programs has undergone substantial and satisfactory growth in the absence of patent protection and that copyright protection for programs is presently available." *Benson*, *supra*, 409 U.S. at 72.

Striking such a balance is all the more rational when there is taken into account the fact that the owner of a "machine" patent (unlike the owner of a "method" patent) can lawfully require the would-be user to purchase the necessary machinery from the patentee or his designee. Compare 35 U.S.C. 154, 271, with *B.B. Chemical Co.* v. *Ellis*, 314 U.S. 495; *Leitch Mfg. Co.* v. *Barber Co.*, 302 U.S. 458. Thus, the owner of a "new machine" patent based on a computer program presumably could, if such patents were allowed, compel the purchase of the computer from him or his designee as the condition for use of the program.

4. Respondent contends (Br. 58–64) that a holding that his claims are nonstatutory under 35 U.S.C. 101 would deprive him of his constitutional right under the Fifth Amendment to equal protection of law, stating that "Equal Protection Requires that Respondent's Machine Invention Be Given the Same Patent Protection Afforded any New and Unobvious Machine." This contention is unfounded.

First, the application involves only a computer program useful for implementing a business idea, not a new machine under 35 U.S.C. 101. Next, respondent has no constitutional right to receive a patent for a "discovery" falling outside the scope of 35 U.S.C. 101. Article I, Section 8, grants Congress the power "To promote the Progress of Science and useful Arts by securing for limited Times to * * * Inventors the exclusive Right to their * * * Discoveries." Congress is given broad discretion to determine when "the Progress of Science and useful Arts" is best served by a grant of exclusive rights to discoveries (see *Gold-*

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stein, supra), and what types of discovery should be included within the definition of patentable subject matter in 35 U.S.C. 101. If changing technology has overtaken its definitions, it is for Congress to strike the new balance between public availability of existing technology, and private reward for creativity. *Twentieth Century Music Corp.* v. *Aiken,* 422 U.S. 151, 156; *Teleprompter Corp.* v. *Columbia Broadcasting System,* 415 U.S. 394; *Fortnightly Corp.* v. *Artists Television,* 392 U.S. 390. There have been numerous significant "discoveries" (in the non-statutory sense) that fall outside Section 101.[7] Congress has so far left computer program ideas (particularly those that are merely computer language translations of ideas for doing mathematics or doing business) in that category.

5. Respondent (Br. 55–56) and *amicus* American Patent Law Association (Br. Amicus Curiae for Am. Pat. L. Assn. 7–10) each contend that the Commissioner has set forth an incorrect standard of patentability (see Pet. Main Br. 22) that improperly extends this Court's decision in *Funk Bros. Seed Co.* v. *Kalo Inoculant Co.,* 333 U.S. 127, beyond the field of biological and similar natural phenomena. In *Benson,* however, this Court made it clear that the standard of patentability set forth in *Funk* is not so limited

[7] *E.g.*, Faraday's laws of electromagnetism, Gibb's phase law and his discovery of vectors, Einstein's two theories of relativity, Russell's and Boole's discoveries in logic (important in the computer field). See generally *Graham* v. *John Deere Co.* 383 U.S. 1, 8–9 and n. 2 (quoting Thomas Jefferson on ideas).

as respondent would have it (409 U.S. at 67–68, emphasis added):

> *Phenomena of nature,* though just discovered, *mental processes,* and *abstract intellectual concepts* are not patentable, as they are the basic tools of scientific and technological work. As we stated in *Funk Bros. Seed Co.* v. *Kalo Co.,* 333 U.S. 127, 130 "He who discovers a hitherto unknown phenomenon of nature has no claim to a monopoly of it which the law recognizes *If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end."* We dealt there with a "product" claim, while the present case deals with a "process" claim. But we think the same principle applies.

In the present case the respondent's alleged "discovery" or "invention" clearly falls within the class the Court considered in *Benson.* It is simply an abstract concept, a method of doing business, the idea of having banks provide their customers with certain bookkeeping services that the customers would otherwise have to do themselves. This business idea is analogous to the idea of providing customers with a drive-in movie, considered in *Loew's Drive-In Theaters* v. *Park-In Theatres,* 174 F. 2d 547 (C.A. 1), in which the court adopted the same reasoning as *Funk* and concluded (*id.* at 551, emphasis added):

> The basic question in this case as we see it is whether, given the idea or conception of an open-air drive-in theatre, an exercise of the inventive faculty was required to devise the means for carrying it out. For it is elementary

> that however new and useful, or even revolutionary and beneficial to humanity, an idea may be, it is not of itself patentable.

Neither *Eibel Process Co.* v. *Minnesota & Ontario Paper Co.*, 261 U.S. 45, nor *United States* v. *Adams*, 383 U.S. 39, suggests a different result. In *Eibel* the prior art machinery employed in the paper industry could not be successfully operated at high speeds without producing defects in the paper, and the technological cause for this mechanical difficulty was unknown. Eibel discovered the mechanical cause of the defect, which no one else had been able to do, and how to build into machines a change which eliminated the problem. "It was the discovery of the source [of the trouble] not before known and the application of the remedy for which Eibel was entitled to be rewarded in his patent" (261 U.S. at 68). In the present case, all we have is respondent's recognition that it might be profitable for banks to add, as an adjunct to their existing checking account business, the service of classifying checks and deposit slips into specified categories, *plus* respondent's devising conventional means of implementing this idea.

In *Adams* the discovery was that a magnesium-cuprous chloride battery could operate with water for the electrolyte and furnish "the first practical, water-activated, constant potential battery which could be fabricated and stored indefinitely without any fluid in its cells" (383 U.S. at 43). The case did not concern statutory subject matter under Section 101, but whether the invention lacked novelty under 35 U.S.C. 102(a) and was obvious from prior art (35 U.S.C.

103). Adams did not, as did respondent, discover an idea whose implementation, "given the idea" required no "exercise of the inventive faculty * * * to devise the means for carrying it out" (*Loew's, supra*). Nothing in *Eibel* or *Adams* in any way detracts from *Funk*, because they do not remotely involve the aspect of *Funk* that this Court relied on in *Benson* and on which we rely here.

CONCLUSION

For the reasons stated in petitioner's main brief and this reply brief, the judgment of the Court of Customs and Patent Appeals should be reversed.

Respectfully submitted.

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